

Listeria monocytogenes bacteria are common in nature and can be found in water, soil and animals. *Listeria* can also be in raw foods (like uncooked meats, vegetables and unpasteurized milk or cheese) as well as ready-to-eat foods that get contaminated after processing (like soft cheeses, hot dogs and lunch meats). People that eat food with *Listeria* can become sick with an illness called listeriosis. Listeriosis is a rare disease that causes an estimated 2500 serious illnesses and 500 deaths in at-risk people in the United States each year.

Although *Listeria* bacteria grow best at warm temperatures, they (unlike many other bacteria that cause foodborne illness) can also grow in the refrigerator. The bacteria can double in number every 1 1/2 days in the refrigerator. *Listeria* are also more heat resistant and less sensitive to food preservatives like salt, nitrates, and smoke than many other bacteria. Because refrigeration and preservatives do not guarantee *Listeria*-safe products, people at high risk for *Listeria* infection should take extra precautions with certain foods.

Symptoms of Listeriosis

Most people infected with *Listeria* will have no symptoms or mild flu-like symptoms. If the infection spreads to the nervous system, symptoms such as headache, stiff neck, and confusion can occur.

Symptoms of infection include:

- nausea, vomiting and diarrhea
- fever, chills and headache
- muscle aches
- stiff neck, confusion and loss of balance

The incubation period [time between eating and symptoms] ranges from several hours before gastrointestinal illness (nausea, vomiting or diarrhea) to several days or weeks for severe illness (with stiff neck, confusion, meningitis or encephalitis). Listeriosis can be diagnosed with a blood or spinal fluid test and is treatable with antibiotics.

Infected pregnant women may experience only a mild, flu-like illness with fever; but the mother's illness can lead to miscarriage, still-birth, premature delivery, or a serious infection of her newborn.

Who is at greatest risk for listeriosis?

People at increased risk of serious illness include:

Fetuses, newborns and infants

- Young or unborn babies, rather than the pregnant mothers, suffer the more serious effects of infection during or after pregnancy.

It has been estimated that about 370 unborn or newborn children are infected with *Listeria* each year in the U.S. Of these children, up to 80 die and 56 suffer lifelong complications.

Pregnant women

- Pregnant women are about 20 times more likely than other healthy adults to get listeriosis. About 1/3 of listeriosis cases happen during pregnancy (usually late in the 2nd or in the 3rd trimester) or within 3 weeks of the newborn's life.

People with weakened immune systems

- People with AIDS (People with AIDS are almost 300 times more likely to get listeriosis than people with healthy immune systems)
- People who take glucocorticosteroid medications
- People over 60 years old
- People with cancer, diabetes, cirrhosis of the liver, asthma, or routine antacid use

Unlike most bacteria that cause illness through food,
Listeria monocytogenes
can grow at refrigerator temperatures.

A few of these bacteria can grow into many, many more while the food is stored in your refrigerator.

Use ready-to-eat foods as soon as possible and cook or wash all produce before eating.

How do you get listeriosis?

Since 1911, we have known that *Listeria* bacteria can infect animals, and early human cases were thought to be likely caught from farm animals. Although this, and other transmissions are possible, most cases of listeriosis are caused by high-risk people eating *Listeria*-contaminated foods. Pregnant women with listeriosis can spread the bacteria to the fetus while inside her body, or directly to her baby at the time of birth.

What can you do to prevent listeriosis?

Because *L. monocytogenes* can grow at refrigerator temperatures, you need to be careful with foods even in the refrigerator.

Steps to reduce the risk of listeriosis:

- Use refrigerated pre-cooked or ready-to-eat foods as soon as possible, always before the expiration date, and within a few days after purchase
- Scrub/rinse or cook all vegetables before eating
- Clean refrigerators (and all spills in the refrigerator) with hot, soapy water weekly
- Keep all raw meats away from other foods
- Cook all raw meats until thoroughly done
- Use a refrigerator thermometer to make sure that the refrigerator stays at 40°F or below
- **People at high risk for serious infection** may want to also limit certain foods or reheat them until steaming hot. These foods include: hot dogs, lunch meats, soft cheeses (feta, Brie, Camembert, blue-veined varieties, and Mexican-style queso blanco or fresco) and salad bars and prepared salads.

Personal Hygiene Tips

The key to reduce illness is to prevent contamination of food. Handwashing and personal cleanliness is an important control measure to prevent spreading *Listeria monocytogenes*.

Always wash your hands before handling food, after handling raw meats *and produce*, and after using the restroom.

Proper handwashing involves the following steps:

- Get the paper towel ready
- Wet hands with warm water
- Use liquid or powdered soap
- Scrub hands, including fingernails, thoroughly with soapy lather for at least 15 seconds
- Rinse hands with warm, running water for at least 15 seconds
- Dry hands with a paper towel

Recommendations to Reduce the Risk of *Listeria* Infection in High-Risk People

Reheat Deli Meats Although the risk of listeriosis from foods at the deli counter is relatively low, high risk individuals may choose to avoid or thoroughly reheat certain foods until steaming hot (or 165°F).

These foods include:

- Hot dogs,
- Luncheon meats and cold cuts,
- Fermented and dry sausage,
- Patés.

Avoid soft Cheeses

Soft cheeses to avoid include:

- Feta, Brie and Camembert
- Blue-veined cheeses
- Queso fresco and blanco

(Cheese that may be eaten include hard cheeses, cream cheese, mozzarella, pasteurized processed cheese spreads, and cottage cheese.)

Do NOT drink *raw* milk

Cows and goats infected with the bacteria can pass it in their milk. Milk can also get contaminated from the environment. Be sure to drink only milk that has been pasteurized to destroy dangerous bacteria.

Do not eat refrigerated smoked seafood, patés or meat spreads

Do not eat paté or smoked seafood that *requires refrigeration* unless you reheat it. Smoked seafood is often labeled as “nova-style,” “lox,” “kippered,” “smoked,” or “jerky.” Canned or shelf-stable patés, meat spreads and smoked seafood have been heat-treated and may be eaten.

Wash or cook all vegetables

Listeria is found in soil and water and can be on vegetables. Be sure to cook (or scrub and wash) all vegetables before eating. For those at greatest risk of serious illness, avoiding foods like prepared salads (e.g. potato salad from the deli case) and from salad bars is also recommended.

Cleaning and Sanitizing

Cleaning and sanitizing often is important to reduce the number of germs on counters and equipment that are used for food preparation. Clean and rinse the surfaces of counters, cutting boards, and utensils before using a sanitizing solution.

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• To prepare a bleach and water sanitizer:
• mix 1 teaspoon of bleach per gallon of cool water.
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Sanitizer can be mixed in a bucket. Clean sanitizing cloths should be returned to the solution often during use and stored in the solution when not in use. The solution will need to be changed every few hours (the bleach evaporates) or as the solution gets greasy or dirty.

Bleach solutions can also be put into air-tight spray bottles. When using spray bottles, fresh bleach solution should be made daily because bleach loses its effectiveness over time. To use: spray or wipe the solution on a clean surface, let it stand for at least one minute, allow it to air dry, or wipe it off with a paper towel.

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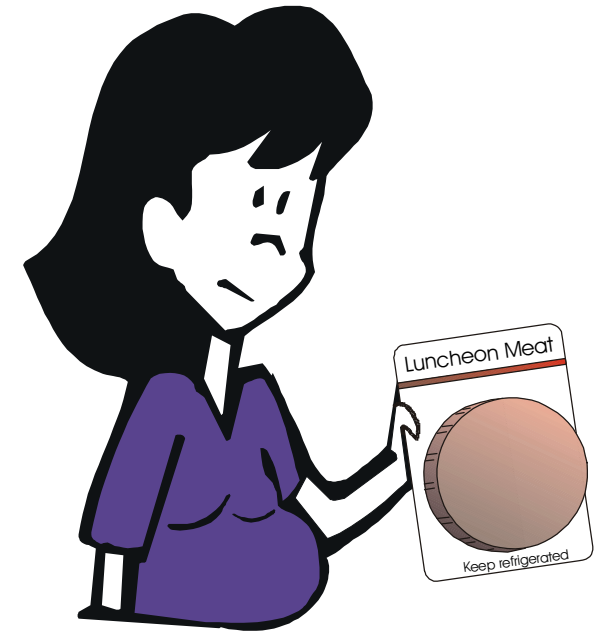
USDA Meat and Poultry Hotline
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Listeria *monocytogenes*

facts about germs series



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